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Shelf-Slope Physical/Biological Response to Monsoonal Wind Forcing and Riverine Inflow - 4D Sampling with Towed Profilers and Autonomous Gliders Off Vietnam

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LONG-TERM GOALS

The long term goal is to understand the coupling of bio-optical processes and properties with physical processes in ocean regions of strong physical forcing. Strong physical forcing can include wind forcing, tidal forcing, and significant freshwater buoyancy fluxes.

OBJECTIVES

To study the dynamics of bio-optical properties in the South China Sea and their response to monsoonal winds, river inputs and topography.

Link *in situ* measurements with remote sensing to be able to constrain parameter values and processes using remote observations.

APPROACH

We propose an observational program using ship-based towed profiling, long-endurance gliders and floats focused on:

1. Processes that govern circulation and biological variability over the shelf and slope, including the interplay between monsoonal wind forcing, freshwater input and topography.
2. Mechanisms that drive cross-slope exchange and communication between the Vietnam shelf and interior South China Sea.
3. The potential use of remotely sensed ocean color for characterizing circulation over the shelf and slope.

WORK COMPLETED

We participated in a planning meeting with potential Vietnamese collaborators in Hanoi, Vietnam during Fall 2011. Evaluations were made of the potential collaborations with Vietnamese agencies. Additional planning documents have been reviewed and edited during the year in preparation for the proposed research effort off of the southern coast of Vietnam and into the South China Sea.

RELATED PROJECTS

This is our only funded effort within ONR.